

**REMARKS**

The Office Action dated July 28, 2004, has been received and carefully noted. The amendments made herein and the following remarks are submitted as a full and complete response thereto.

Claims 1, 3, 4 and 8 are pending. By this amendment, Claims 3 and 4 are canceled, and the subject matter thereof is incorporated into claim 1. Applicants submit that the amendments made herein are fully supported in the specification and the drawings as originally filed, and therefore no new matter has been added. Accordingly, claims 1 and 8 are pending in the present application and are respectfully submitted for consideration.

Favorable reconsideration of this application is respectfully requested in view of the foregoing amendments and following remarks.

In the outstanding Office Action, Claim 3 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claim 3 has been canceled, thereby rendering the rejection thereof moot.

In the outstanding Office Action, Claims 1, 3, 4, and 8 were rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Sharma et al. (U.S. Patent No. 5,980,701, "Sharma") and Claims 1, 3, 4, and 8 were rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over

Eliasson et al. (U.S. Patent No. 6,375,832, "Eliasson"). Applicants respectfully traverse this rejection for at least the reasons set forth below.

Claims 3 and 4 have been canceled, and the subject matter thereof has been incorporated into claim 1. Claim 1 as amended recites, in part:

the generating means comprises:  
a pair of electrodes facing each other in the longitudinal direction; and  
a dielectric material positioned between the pair of electrodes, wherein a predetermined gap  $d$  is formed between at least one of the electrodes and the dielectric material, and wherein an amount  $a$  at the center of the dielectric material in the width direction, is offset from the midpoint of the distance between the pair of electrodes and satisfies the formula  
$$0 \leq a \leq 0.5 \times (d / 2).$$

Applicants respectfully submit that both Sharma and Eliasson fail to disclose or suggest the generating means as recited in Claim 1. Specifically, Sharma and Eliasson fail to disclose or suggest a dielectric material positioned between the pair of electrodes, wherein a predetermined gap  $d$  is formed between at least one of the electrodes and the dielectric material, and wherein an amount  $a$  at the center of the dielectric material in the width direction, is offset from the midpoint of the distance between the pair of electrodes and satisfies the formula  $0 \leq a \leq 0.5 \times (d / 2)$ .

Rather, Sharma discloses a first electrode 110 positioned above a surface 112 of an aqueous mixture 102 and a second electrode 114 in contact with the aqueous mixture 102. Sharma further discloses completely encasing the conductive element 132 of the first electrode 110 in a dielectric material, so that the dielectric material 130 is between the conductive element 132 of the first

electrode 110 and the surface 112 of the liquid 102. Sharma neither discloses nor suggests a dielectric material positioned between the pair of electrodes, wherein a predetermined gap  $d$  is formed between at least one of the electrodes and the dielectric material, and wherein an amount  $a$  at the center of the dielectric material in the width direction, is offset from the midpoint of the distance between the pair of electrodes and satisfies the formula  $0 \leq a \leq 0.5 \times (d / 2)$ , as recited in claim 1.

Eliasson discloses a dielectric barrier discharge reactor in which a high voltage AC generator 1 is connected to a first electrode 2 and a second grounded electrode 3, a dielectric covering at least a portion of an electrode, and a shape-selective catalyst 5 covering the dielectric layer 4. However, unlike the invention as claimed, Eliasson fails to disclose or suggest a dielectric material positioned between the pair of electrodes, wherein a predetermined gap  $d$  is formed between at least one of the electrodes and the dielectric material, and wherein an amount  $a$  at the center of the dielectric material in the width direction, is offset from the midpoint of the distance between the pair of electrodes and satisfies the formula  $0 \leq a \leq 0.5 \times (d / 2)$ .

To qualify as prior art under 35 U.S.C. §102, a single reference must teach, i.e., identically describe, each feature of a rejected claim. As explained above, the Sharma and Eliasson patents do not disclose or suggest each and every feature of rejected independent Claim 1 of the instant application. Therefore, the Sharma and Eliasson patents do not anticipate Claim 1, nor is Claim 1 obvious in view of Sharma and Eliasson. Accordingly, Applicants

respectfully submit that independent Claim 1 should be deemed allowable over Sharma and Eliasson.

Moreover, to establish *prima facie* obviousness of a rejected claim, the applied art of record must teach or suggest each feature of a rejected claim. See M.P.E.P. §2143.03. As explained above, none of the applied art of record, either alone or in combination, teach or suggest each and every feature recited by independent Claim 1 of the instant application. Accordingly, Applicants respectfully submit that independent Claim 1 is not rendered obvious in view of the applied art of record and should be deemed allowable.

Claim 8 depends from Claim 1 and as such, Claim 8 should be deemed allowable for at least the same reasons as Claim 1, as well as for the additional subject matter recited therein.

Applicants respectfully request withdrawal of the rejections.

### **Conclusion**


In view of the above, Applicants respectfully submit that Claims 1 and 8 recite subject matter that is neither disclosed nor suggested in the cited prior art. Applicants also submit that the subject matter is more than sufficient to render the claims non-obvious to a person of ordinary skill in the art, and therefore respectfully request that Claims 1 and 8 be found allowable and that this application be passed to issue.

If for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact

the Applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper has not been timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300 referencing Attorney Docket No. 107348-00102.

Respectfully submitted,

  
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